

Outbreak Management System (OMS) Demonstration

Presented by Antonio DaSilva, OMS Trainer
aod7@cdc.gov



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What is the Outbreak Management System?

- One component of the overall outbreak management strategy
- Supports CDC field response teams, the DEOC and state and local public health agencies



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Outbreak Management System

The OMS core application supports collection and analysis of data:

- Major components of outbreak data
- Standardized and extensible data collection elements
- Adaptable to any biological, chemical, or radiological agent



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Outbreak Management System

Additional features include

- Dynamic configurations
- Flexible deployment options
- Synchronization of data across installations and jurisdictions
- PHIN standard case messaging



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OMS Design Concepts

- Standardized and dynamic data collection components
- Data linkages
- Support for mobility (network/stand-alone)



Standardized and Dynamic Components

- Standard data collection components (PHIN Vocabulary)
 - Demographics, case investigation, and contact tracing implemented as standard screens .
- Dynamic data collection components
 - Custom data collection screens added as supplemental data.
- Analysis
 - Integrated analysis tool
 - Open analysis architecture



Data Linkages

- Support for linking entities to indicate exposure or association
- Single instance of an entity linked to multiple entities using exposure and relationship functionality
- Dynamic typing of entities and linkages



Data Linkage Examples

- SARS
 - Linkages of exposed persons to conveyances, locations, and infected persons
- Monkeypox
 - Linkages of exposed persons to infected animals, swap meets (locations), animal shipments (objects)
- Foodborne Outbreaks
 - Linkages of exposed persons to contaminated foodstuffs (objects), consumed at restaurants (locations)



Dynamic Typing of Entities and Linkages

- Support creation of new entities and relationship types.
- Monkeypox investigation
 - Animals tracked via shipping invoice
 - Created “Invoice” entity
 - Defined attributes
 - Create “Document” relationship
 - Associated organizations and invoices



Support for Mobility and Data/Configuration Distribution

- Stand-Alone and Networked
 - Users can connect to central database.
 - Data collected off-line can be replicated across installations and jurisdictions.
- Publishing of standard configurations for specific investigations
 - Configurations published to web accessible location for remote retrieval.
 - Distribution of updates to core application
 - Support for localization of configurations



Prepared for Deployment

- Configured tables available for:
 - Botulism
 - Chemical investigations
 - Rapid Response Registry
 - SARS
 - Smallpox
 - TB
 - Arsenic
 - Occupational exposures



Configurations Under Development

- Radiological Investigations
- Anthrax
- Cadmium, Dioxin, Lead, Pesticides, Indoor Air, and Soil Exposures
- Foodbourne Outbreaks



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OMS Collaborations

Working with CDC and external partners:

- ATSDR
- NCHSTP
- NCEH
- NCID
- NIP
- 27 State, county, local, and international partners



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Ready for Deployment

- Available for immediate deployment in event of DEOC activation
- Business analysts and data modelers available to work with CIOs to determine requirements for continued development and configuration



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Questions?



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OMS Demonstration

- User interface and navigation elements
- Sample workflow
- Configuration and Supplemental Data
- Analysis



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Thank You!

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